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ABSTRACT

In the early years of the Internet, there was an expectation that the availability and easy access to online resources of unparalleled abundance would increase educational equity throughout the socio-economic spectrum. In fact, research suggests that patterns of technology access often mirror existing inequalities rather than mitigate them, and if corrective steps are not taken, technology may worsen rather than solve equity disparities. Major obstacles to using the Internet are cost and knowledge of how to use the Internet. Among the educational benefits language arts teachers describe are those involving the development of research skills, integrated learning, interactivity, writing for real purposes and authentic audiences, handling difficult topics in new ways, multicultural learning, and collaborative problem solving. Despite the rapid growth of wired schools, surveys suggest that use of technology to affect classroom practice tends to be limited to small groups of teachers who are excited by the potential they believe technology has to motivate their students or to access new sources. Contains 20 references. (RS)

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D153

The Digital Divide and Its Implications for the Language Arts

by Mila Stoicheva

The term Digital Divide came to public attention after a 1995 study by the Markle Foundation revealed that the "same divergence found in society along cultural and racial lines is found online and offline". Lloyd Morrisett, the former president of the Markle Foundation, called it a "digital divide" between the information "haves" and "have-nots." The major obstacles to using the Internet were found to be cost and knowledge. (CNET News.com, March 14, 1997) These findings have been supported by Novak and Hoffman, 1998, the first study to collect data on race and ethnicity, and by three U.S. Commerce Department and the National Telecommunications and Information Administration reports (1995, 1998, 1999). The Digital Divide has been called the Civil Rights issue of the new millenium. (Carvin, 2000)

These findings fostered a wave of initiatives by the U.S. President and by corporations and non-profit organizations. On April 4, 2000 President Clinton announced that over 400 companies and non-profit organizations have signed a "National Call To Action" plan to meet two critical goals:
1. Provide 21st century learning tools for every child in every school.
2. Create digital opportunity for every American family and community.

While these initiatives address a basic problem - that of the cost of computer ownership and Internet access - this is only one aspect of a set of related issues. Local and community information, content for limited literacy users, and multilingual and multicultural content have, thus far, not been prominent online. Thus, content-related barriers may turn out to be more difficult to overcome than those of computer access. (Lazarus and Mora, 2000)

In addition, knowledge of how to use the Internet was found to be a second major factor contributing to the digital divide. And this is where the education community has a crucial responsibility. Even when access to rich Internet content is technically available, teachers must have a high degree of commitment and skill to actually take advantage of the opportunity which the resource provides.

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Internet Access at Schools

In 1997, 78% of public schools had Internet access but only 27% of instructional rooms had access. (NCES, 1998) Public schools with a high-percentage of low-income and minority students were less likely to have Internet access than those with a low percentage of low-income students and minority students.

What do children gain from using the Internet in the language arts classroom?

A large number of the available publications exploring Internet use consist of classroom resources for teachers -- Web guides, lesson plans, recommended strategies, instructions for searching. Due to the short time that the Internet has been available in schools, there are no comprehensive studies on the relationship between its use and language arts achievement.

A major source of information about the advantages of Internet use in the classroom are enthusiastic teachers who relate their experiences. As one first grade teacher concludes having used online projects throughout the academic year, *"the only limitations to using telecommunications (with young) students are those we impose ourselves by failing to empower them."* (Oakes, 1996)

Among the educational benefits language arts teachers describe are those involving the development of research skills, integrated learning, interactivity, writing for real purposes and authentic audiences, handling difficult topics in new ways, multicultural learning, collaborative problem solving, etc. (Sosenke, 2000; Taverna, 2000, etc.)

They perceive that using the Internet leads to student empowerment, and increased motivation and interest. It helps at-risk and multilingual students develop literacy skills, and fosters family involvement. Teachers also report enriched self-esteem and sense of accomplishment in their students. (Medrinos, 1997; Clovis, 1998, etc.) Moreover, through use of the Internet students acquire skills needed for our age. Welter, 1999, warns that if students are left without the necessary skills to use advanced technology, it may render them incapable of participating effectively in a modern socio-economic system.

The Digital Divide as a pedagogical issue

Despite the rapid growth of wired schools in recent years, surveys suggest that use of technology to affect classroom practice tends to be limited to small groups of teachers who are excited by the potential they believe technology has to motivate their students or to access new resources. (Glennan, 1996) Studies indicate that teachers' use of the Internet varies greatly according to their perception of the value of the Internet for instructional purposes. Many educational institutions and individual teachers simply may not be ready for the transformation of teachers' roles and teaching in general which are necessary to the effective use of the Internet. Nellen, 1998, for example, offers three pieces of advice that may not be equally appealing to all teachers: 1) become a student, 2) morph into a cybrarian and 3) empower students.

Becker makes the following observation regarding the adoption of technology: *"It may be, then, that diffusion of Internet use to larger numbers of teachers will reach a barrier when most of the remaining non-participants hold beliefs that are not as compatible with Internet use as constructivism seems to be-in other words, teachers who believe in a skills-based curriculum, organized in a fixed, externally-determined sequence, and who teach a uniform aggregation of content which all students should master."* (Becker, 1999)

In his study of teacher use of the Internet, Becker found that teachers assigned to "high-achieving" classes were more likely to use the Internet and to find it essential in their teaching than teachers with "average" classes. Teachers of "average" classes were more likely than were teachers with "low" classes to use it.

On the other hand, Becker and Ravitz, 1999, find that using the Internet can change teachers pedagogical beliefs and lead to more constructivist practices. They point out three facilitating factors: 1) Positive attitude among peers, 2) Information and social support resources, and 3) Appropriate educational resources.

Conclusion

In the early years of the Internet there was an expectation that the availability and easy access to online resources of unparalleled abundance would increase educational equity throughout the socio-economic spectrum. In fact, research suggests that patterns of technology access often mirror existing inequalities rather than mitigate them (Schofield, 1998) and if corrective steps are not taken, technology may worsen rather than solve equity disparities. (Serim, 1999)

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